Reviewer’s report

Title: Association between hepatitis B virus infection and metabolic syndrome: a retrospective cohort study in Shanghai, China.

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Reviewer: Peter Jarcuska

Reviewer’s report:

Dear sir,

It is honour for me to review paper by Zhou et al. Association between hepatitis B virus infection and metabolic syndrome: a retrospective cohort study in Shanghai, China.

The topic of this manuscript is very interesting, but the principal changes in paper are necessary to improve of the manuscript’s quality.

Methods:
Did authors examine anti HBc antibodies in HBsAg negative patients? Positivity of anti HBc antibodies could influence of MS incidence (it was demonstrated in previously published studies)

Figure 1, selection of subjects during the study:
please add in this figure:
How many patient HBsAg positive (without MS) and HBsAg negative (without MS) had been recorded in year 1991?

How many patients were excluded from the study during follow up from both groups due to:
- hepatitis C
- liver complications (compensated and decompensated cirrhosis, HCC, liver disease associated death, others)
- cardiovascular and metabolic complicantions (myocardial infarction, stroke, sudden cardiovascular death, others)
- other complications including death from other reasons

Had been patients really tested for HCV in 1991?

Definition of metabolic syndrome
Why authors did use National Cholesterol Education Program Adult Treatment Panel # criteria from year 2001? Please to explain in text of this chapter.

Analyses of possible risk factors.
Please to define
- smoking,
- passive smoking,
- drinking,
- high-energy food intake,
- fresh fruits and vegetables intake
- physical activity

Analyses of HBV infection associated with MS

Analysis is performed well, but I recommend to extend further statistics. It would be very interesting to analyse, how does HBV infection influence not only MS, but also individual components of MS. I also recommend to calculate crude age-adjusted hazard ratio between HBV infection and
- increased waist circumference or BMI
- hypertriacylglycerolemia
- low HDL-C
- blood pressure>130/85mmHg or current use of antihypertensive medications
- hyperglycaemia or antidiabetic therapy use.

Analyses could be made independently for men and for women.

Discussion need to be improved. I ask the authors to clarify, why they do find higher incidence of MS among HBV patients than in other studies (longer follow up?, lifestyle differences in Puto people? other?).

New articles studying association between HBV infection and MS should be cited in manuscript:


If authors will perform recommended changes, please to send me paper for reevaluation.

Thanks, PJ
Level of interest: An article of importance in its field

Quality of written English: Needs some language corrections before being published

Statistical review: Yes, and I have assessed the statistics in my report.

Declaration of competing interests:

I declare that I have no competing interests